

### **REMARKS**

In response to the Office Action dated January 4, 2008, Applicant respectfully requests reconsideration based on the attached amendment and the following remarks. Applicant respectfully submits that the claims as presented here are in condition for allowance.

Claims 1-3 and 5-10 stand rejected and remain pending in the present application. Claims 1, 7, 9 and 10 have been amended. Support for the amendments to independent claims 1 and 9 may be found at least on pages 10-12 of the specification, and FIGS.4 and 5, as originally filed. No new matter has been added by the amendment. Applicants respectfully request reconsideration of claims 1-3 and 5-10 based on the amendment and the following remarks.

#### **Claim Rejections Under 35 U.S.C. §102**

Claims 1, 6, 9 and 10 stand rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by Waki et al. (U.S. Patent No. 5,233,273, hereinafter "Waki"). The Examiner states that Waki discloses all of the elements of the abovementioned claims, primarily in FIGS. 2-9, 11, 13 and 17 and column 3, lines 31-34. Applicant respectfully traverses for at least the reasons set for below.

Waki discloses a starting circuit for a discharge lamp that can be made more compact, for a metal halide lamp, for example. [See Abstract and col. 1, lines 10-11.] More specifically, FIG. 17 of Waki relied upon by the Examiner discloses that the detector 17 also has a function to detect the lamp state by detecting the lamp temperature such as the surface temperature of the arc tube of the discharge lamp 15 or the temperature of the environment around the discharge lamp 15 and to decide if the discharge lamp 15 is in the cool state or in the hot state. If the discharge lamp 15 is detected to be in the hot state, the lighting controller 71 changes the oscillation frequency of the high frequency inverter 20 up to say about 100 kHz higher than the frequency at the starting according to the detection signal from the detector 17. This frequency is set around the fundamental frequency determined by the impedance of the LC series resonance circuit [choke coil 14 and capacitor 13', respectively], and a resonance voltage higher than that on the resonance with use of the third harmonic is generated across the two terminals of the capacitor 13' to be supplied to the discharge lamp 15. Then, breakdown occurs between the main electrodes of the discharge lamp 15, and the initial discharge is started. After the initial

discharge is started, the starting current generated by the resonance flows via the choke coil 14' to the discharge lamp 15 and the glow discharge in the discharge lamp 15 transfers to arc discharge. The oscillation frequency of the high frequency inverter 20 is controlled in order to operate the discharge lamp 15 in the rated conditions. (Col. 18, line 59- col. 19, line 16.)

The Examiner states on page 3 of the Detailed Action that Waki discloses “a buffer (included within the temperature sensor 17 to decide the lamp state) for generating a second signal (i.e., signal inputted to the lighting controller 71) based on the first signal from the temperature sensor (17) . . . .” However, it is respectfully submitted that Waki neither expressly, nor inherently, discloses such a buffer. Moreover, Waki does not disclose or suggest such a buffer generating the second signal having the first level and the second level.

In particular, Waki does not teach or suggest **a buffer generating a second signal based on the first signal from the temperature sensor and providing the second signal for the inverter controller; and an inverter controller which generates a control signal for controlling the inverter depending on the second signal of the buffer, wherein the voltage applied to the light source is increased based on the control signal, the second signal is a square wave having a first level and a second level, and the second signal is at the first level when the sensed temperature is higher than a predetermined temperature and the second signal is at the second level when the sensed temperature is lower than a predetermined temperature,** as in amended independent claim 1, and similarly claimed in amended independent claim 9. Thus claims 1 and 10, including claims depending therefrom, i.e., claims 2-8 and 10, define over Waki. Therefore it is respectfully submitted that amended independent claim 1, including claims depending therefrom, i.e., claims 1, 6, 9 and 10, define over Waki.

Accordingly, it is respectfully requested that the rejection to claims 1-3 under § 102(b) be withdrawn and that a notice of allowance be issued with respect to claims 1, 6, 9 and 10.

### **Claim Rejections Under 35 U.S.C. §103**

Claims 2, 3, 5, 7 and 8 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Waki in view of Tsuchiya et al. (U.S. Patent No. 6,166,491, hereinafter “Tsuchiya”). The Examiner states that Waki discloses all of the elements of the abovementioned claims except, *the temperature sensor comprises a thermistor having a resistance varying depending on the sensed temperature and a resistor connected to the thermistor and the resistor*

*functions as a voltage divider along with the thermistor*, which the Examiner further states is disclosed primarily in FIG. 4, column 1, lines 58-61 and column 4, lines 52-62 of Tsuchiya.

Claims 2, 3, 5, 7 and 8 depend from claim 1, which is respectfully submitted as being allowable for defining over Waki as discussed above. Furthermore, it is respectfully submitted that use of the *a thermistor having a resistance varying depending on the sensed temperature and a resistor connected to the thermistor and the resistor functions as a voltage divider along with the thermistor* as allegedly disclosed in Tsuchiya, or any other disclosure of Tsuchiya, does not cure the deficiencies noted above with respect to Waki.

Accordingly, it is respectfully requested that the rejection to claims 2, 3, 5, 7 and 8 under § 103(a) be withdrawn and that a notice of allowance be issued with respect to claims 2, 3, 5, 7 and 8.

**Conclusion**

In view of the foregoing remarks distinguishing the prior art of record, Applicant submits that this application is in condition for allowance. Early notification to this effect is requested.

The Examiner is invited to contact Applicant's Attorneys at the below-listed telephone number regarding this Amendment or otherwise regarding the present application in order to address any questions or remaining issues concerning the same.

If there are any charges due in connection with this response, please charge them to Deposit Account 06-1130.

Respectfully submitted,

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Date: April 4, 2008